1. Solve the linear inequality below. Then, choose the constant and interval combination that describes the solution set.

$$7 + 7x > 9x \text{ or } 6 + 5x < 6x$$

A. $(-\infty, a) \cup (b, \infty)$, where $a \in [-9, -2.25]$ and $b \in [-7.5, -1.5]$

B. $(-\infty, a) \cup (b, \infty)$, where $a \in [0, 7.5]$ and $b \in [5.25, 9]$

C. $(-\infty, a] \cup [b, \infty)$, where $a \in [-6.75, -4.5]$ and $b \in [-4.5, 0]$

D. $(-\infty, a] \cup [b, \infty)$, where $a \in [-0.75, 7.5]$ and $b \in [4.5, 7.5]$

E. $(-\infty, \infty)$

2. Solve the linear inequality below. Then, choose the constant and interval combination that describes the solution set.

$$\frac{-6}{8} + \frac{5}{3}x \le \frac{7}{4}x + \frac{10}{6}$$

A. $(-\infty, a]$, where $a \in [-30.75, -27.75]$

B. $(-\infty, a]$, where $a \in [25.5, 34.5]$

C. $[a, \infty)$, where $a \in [-31.5, -23.25]$

D. $[a, \infty)$, where $a \in [24.75, 30.75]$

E. None of the above.

3. Using an interval or intervals, describe all the x-values within or including a distance of the given values.

No less than 5 units from the number -8.

A. $(-\infty, -13] \cup [-3, \infty)$

B. $[-13, -3]$

C. $(-\infty, -13) \cup (-3, \infty)$

D. $(-13, -3)$

E. None of the above

4. Solve the linear inequality below. Then, choose the constant and interval combination that describes the solution set.

$$-5 + 4x \le \frac{36x - 7}{8} < 7 + 3x$$

A. $(-\infty, a) \cup [b, \infty)$, where $a \in [3.75, 9.75]$ and $b \in [-8.25, -1.5]$

B. $[a, b)$, where $a \in [3.75, 12]$ and $b \in [-9.75, 0]$

C. $(a, b]$, where $a \in [2.25, 12]$ and $b \in [-6.75, -2.25]$

D. $(-\infty, a] \cup (b, \infty)$, where $a \in [6, 10.5]$ and $b \in [-8.25, -2.25]$

E. None of the above.

5. Solve the linear inequality below. Then, choose the constant and interval combination that describes the solution set.

$$-8 + 9x > 10x \text{ or } 9 + 4x < 6x$$

A. $(-\infty, a] \cup [b, \infty)$, where $a \in [-9.75, -5.25]$ and $b \in [2.25, 7.5]$

B. $(-\infty, a) \cup (b, \infty)$, where $a \in [-13.5, -6]$ and $b \in [1.5, 5.25]$

C. $(-\infty, a] \cup [b, \infty)$, where $a \in [-6, -3]$ and $b \in [6, 12.75]$

D. $(-\infty, a) \cup (b, \infty)$, where $a \in [-7.5, 0.75]$ and $b \in [6, 13.5]$

E. $(-\infty, \infty)$

6. Solve the linear inequality below. Then, choose the constant and interval combination that describes the solution set.

$$-9x - 8 \le 7x + 3$$

A. $[a, \infty)$, where $a \in [-1.69, 0.31]$

B. $[a, \infty)$, where $a \in [-0.31, 4.69]$

C. $(-\infty, a]$, where $a \in [0.3, 3.6]$

D. $(-\infty, a]$, where $a \in [-2.1, 0.5]$

E. None of the above.

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7. Solve the linear inequality below. Then, choose the constant and interval combination that describes the solution set.

$$-9x + 5 > 9x - 9$$

A. $(-\infty, a)$, where $a \in [-0.08, 1.47]$

B. (a, ∞), where $a \in [-1.8, 0.5]$

C. $(-\infty, a)$, where $a \in [-2, -0.04]$

D. (a, ∞), where $a \in [-0.4, 2.9]$

E. None of the above.

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8. Solve the linear inequality below. Then, choose the constant and interval combination that describes the solution set.

$$-3 - 3x < \frac{-6x + 8}{3} \le 7 - 5x$$

A. $(a, b]$, where $a \in [3.75, 8.25]$ and $b \in [-3.45, 0]$

B. $(-\infty, a] \cup (b, \infty)$, where $a \in [3.75, 6.75]$ and $b \in [-3.75, -0.75]$

C. $[a, b)$, where $a \in [3.75, 7.5]$ and $b \in [-6, 0]$

D. $(-\infty, a) \cup [b, \infty)$, where $a \in [3, 7.5]$ and $b \in [-1.95, -0.75]$

E. None of the above.

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9. Using an interval or intervals, describe all the x-values within or including a distance of the given values.

No more than 7 units from the number -9.

A. $(-\infty, -16] \cup [-2, \infty)$

B. $(-16, -2)$

C. $[-16, -2]$

D. $(-\infty, -16) \cup (-2, \infty)$

E. None of the above

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10. Solve the linear inequality below. Then, choose the constant and interval combination that describes the solution set.

$$\frac{-5}{2} + \frac{3}{6}x < \frac{10}{8}x - \frac{6}{7}$$

A. $(-\infty, a)$, where $a \in [-0.75, 3.75]$

B. $(-\infty, a)$, where $a \in [-5.25, 1.5]$

C. (a, ∞), where $a \in [0, 3]$

D. (a, ∞), where $a \in [-4.5, -1.5]$

E. None of the above.